DATA DEFINITIONS, SOURCES AND DATA-USE NOTES

Data Year: Most County Health Profile information is based on events occurring in calendar year 2000, which is the most current data year, or an average of years 1996-2000. The most current data year for information based on U. S. Bureau of the Census (Census) *enumerations* is 2000. Census population *estimates* (April 2002 revision) were used for 1996-99 in determining five-year rates.

Data Sources: The specific sources of data are indicated below, with the data definitions. In general, vital data on reported pregnancy outcomes, births, and deaths were provided in electronic files by the Office of Vital Statistics, Montana Department of Public Health and Human Services (DPHHS). The Office of Vital Statistics receives reports on live births and fetal deaths for all Montana residents and induced abortions occurring within the state. There is no provision for reporting spontaneous abortions (miscarriages), regardless of where they occur, or induced abortions that occur outside Montana. Fetal deaths are reportable only after the fetus has reached 350 grams or, if the weight is unknown, 20 weeks of gestation.

Population data came from the Census and Economic Information Center (CEIC), Montana Department of Commerce (http://ceic.commerce.state.mt.us/), and the U.S. Census Bureau (http://www.census.gov/main/www/cen2000.html), in the format of downloadable files.

Data Reliability: Many Montana counties have small populations and, therefore, the number of events in a given year, or even when summed over several years, are small. Because of the small number of events, rates based on these numbers are likely to be unstable, varying substantially between years or over longer periods of time. To assist in interpreting these rates, we have provided rates that are averaged over a five-year period, 1996-2000 and/or provided the absolute number of events in parentheses next to the rate. Users of County Health Profiles are cautioned that these data are not intended for forecasting.

Death Rates: This document reports crude death rates throughout. Comparison of crude rates over time or between populations may be misleading if significant differences exist in the demographics (e.g., age, race) of the populations being compared; observed differences in rate may result solely from population differences. Nonetheless, crude rates characterize the experience of a population at a given point in time and are useful for planning and funding purposes.

County Description

Health Department and Health Officer: From listings maintained by the Montana Department of Public Health and Human Services (DPHHS) Health Systems Bureau, updated July/August 2002.

Reservation: The presence of a reservation is indicated for the primary county of American Indian (one race) residence for all Montana reservations. For reservations located in more than one county, the reservation is noted when the American Indian (one race) population of the county is greater than the Montana average (6.2%).

National Priorities List (NPL) Superfund Site: Information on active sites in Montana is from the Environmental Protection Agency website (http://www.epa.gov/region08/superfund/sites/mt/mtsf.html) accessed in September 2002. The National Priorities List is a published list of hazardous waste sites in the U.S. eligible for comprehensive, long-term cleanup under the Superfund program. Listing on the NPL makes a site eligible to receive Superfund monies for cleanup; however, listing does not automatically qualify sites for funding.

Metropolitan Area: As defined by the U.S. Office of Management and Budget (OMB) Metropolitan-Nonmetropolitan System. OMB standards generally provide that each metropolitan area must include at least: a) one city with 50,000 or more inhabitants, or b) a Census Bureau-defined urbanized area (of at least 50,000 inhabitants) and a total metropolitan population of at least 100,000 (75,000 in New England). By definition, the entire county containing the qualifying city/area is included as part of the metropolitan area. Metropolitan counties are not synonymous with wholly urban counties (as defined by the U.S. Census) and can contain significant rural populations. By this definition, Cascade County is "Metropolitan" (population density 29.8/sq. mi.) while Silver Bow County is "Nonmetropolitan" (population density 48.2/sq. mi.). See also "Population Density and Status" below.

Demographics

Population Density and Status: Population density is the calculated number of persons per square mile, based on the 2000 U.S. Census enumeration of county population and report of county size. An area is "Frontier" if the population density is 6 or fewer persons per square mile. A "Rural" area has more than 6 and fewer than 50 persons per square mile. All Montana counties are rural or frontier as defined by population density. These designations were developed by the U.S. Department of Health and Human Services, Bureau of Primary Health Care (1986).

Urban Population: The population living in Urbanized Areas or Urban Clusters as defined by the U.S. Bureau of the Census; from a CEIC table of the Census 2000 Montana population (http://ceic.commerce.state.mt.us/Urban_Rural.html). Urban Area and Urban Cluster boundaries encompass densely settled territories consisting of:

- core census block groups or blocks that have a population density of at least 1,000 people per square mile and
- surrounding census blocks that have an overall density of at least 500 people per square mile.

Additionally, an Urbanized Area must have a population of at least 50,000 people. An Urban Cluster must have a population of at least 2,500 and less than 50,000. All other territory is classified "Rural."

Population Gender, Age, and Race: From the 2000 U.S. Census enumeration of county and state population (http://ceic.commerce.state.mt.us/ ; http://factfinder.census.gov/home/en/sf2.html). "White" and "American Indian" race categories include those of one race only; "Other" includes all other single race persons as well as those indicating two or more races.

Educational Attainment: From the 2000 U.S. Census enumerations of counties and state (http://ceic.commerce.state.mt.us/sf3demogProMT.html).

Employment by industry: "Employment by industry" lists the three largest industries in the county/state in terms of the percent of all full- and part-time jobs in the year 2000; it includes both wage/salary employment and proprietors' employment. Data are from the Montana Department of Commerce Regional Economic Information System (REIS) and were released May 6, 2002 (http://ceic.commerce.state.mt.us/CountyData.html).

"Notable others" are additional industries that comprise at least ten percent of full- and part-time jobs in the county. "Other" means information about the number of jobs was not shown for *more than one industry* in the county (to avoid disclosure of confidential information) *and* the missing information corresponded to twenty-five percent or more of total jobs.

Unemployment Rate: 2001 unemployment data tabulated for each county by the Montana Department of Labor and Industry, Office of Research & Analysis (http://rad.dli.state.mt.us/).

Median Household Income: From the 2000 U.S. Census, 50% of the households in the county/state reported this total annual income or less in 1999 (http://ceic.commerce.state.mt.us/sf3demogProMT.html).

Per Capita Income: From the 2000 U.S. Census, per capita income in 1999 is the mean income computed for every man, woman, and child in a particular group (in this case, each county and the state). It is computed by dividing the total income of the group by the number of individuals in the group (http://ceic.commerce.state.mt.us/sf3demogProMT.html).

Percent of Population at or Below Federal Poverty Level: Obtained from: 1) The MT CEIC table "Poverty Status in 1999 for All Counties" and the U.S. Census 2000 table "Poverty Status in 1999 by Age." Both of these tables are from U.S. Census 2000 Summary File (SF) 3 data released May 14, 2002 (http://ceic.commerce.state.mt.us/CenPopHousSF3.html). "18+ yrs" means individuals eighteen years of age and older, including those 65 and older. 2) The U.S. Census 2000 table "Ratio of Income in 1999 to Poverty Level" from the Summary File (SF) 3 sample data released August 27, 2002.

Percent of Population with Health Care Costs Covered by a Government Payor: The percent of the population on Medicaid is the count of persons enrolled in Medicaid for a minimum of one month during the 2001 state fiscal year divided by the 2000 Census population for the area. An individual is counted for each county of enrollment (duplicated) but only once (unduplicated) for the total state enrollment. The Medicaid Services Bureau of DPHHS provided these data.

The percent of the population on Medicare is the count of all Montana-resident beneficiaries with any type of Medicare coverage during the month of June 2000 (mid-year) and not known to be deceased as of June 1, 2000 divided by the 2000 total area population. These data were provided by the Mountain-Pacific Quality Health Foundation, Helena, MT.

Percent of the Population with a Disability: From the 2000 U.S. Census, this measure indicates disability of the civilian, non-institutionalized population 21years and older (http://ceic.commerce.state.mt.us/sf3demogProMT.html). People 5 years old and over are considered to have a disability if they have one or more of the following: (a) blindness, deafness, or a severe vision or hearing impairment; (b) a substantial limitation in the ability to perform basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying; (c) difficulty learning, remembering, or concentrating; or (d) difficulty dressing, bathing, or getting around inside the home. In addition to the above, people 16 years old and over are considered to have a disability if they have difficulty going outside the home alone to shop or visit a doctor's office, and people 16-64 years old are considered to have a disability if they have difficulty working at a job or business.

Live Births and Deaths per 1,000 Population: Number of vital events (births or deaths) occurring in the five-year period, 1996-2000, divided by the total area midyear population and multiplied by 1,000. Births are enumerated by the mother's county of residence; deaths by the decedent's county of residence. Data are from the Office of Vital Statistics, DPHHS (http://www.dphhs.state.mt.us/services/statistical_information/statistical_information.htm).

Median Age by Gender and Race: The midpoint in the range of ages (i.e., 50% of the persons in the category were the median age or older). "White" and "Am Ind" include those of one race only. Data are from the U.S. Census Bureau, Census 2000 (http://factfinder.census.gov/servlet/BasicFactsServlet).

Median Age at Death: The midpoint in the range of ages at death (i.e., 50% of the persons in the category were the median age or older at the time of death). Either racial category may include "Hispanic"; "All" also includes unknown race. Data are from the Office of Vital Statistics, DPHHS, for the five-year period 1996-2000.

Health Status Indicators

Fertility Rates: The *teen fertility rate* per 1,000 population is the five-year (1996-2000) sum of births to females aged 19 and younger divided by the five-year sum of females in the population aged 15 to 19, multiplied by 1,000. The *fertility rate for all women* is the five-year sum of births to all females divided by the five-year sum of females in the population aged 15 to 44, multiplied by 1,000. The populations of women younger than 15 and older than 44 are not used in the denominator because relatively few of the women in these age groups are likely to give birth. Including total populations for those age groups in the denominator would yield an underestimate of the true fertility rate. This calculation method, used throughout the U.S., yields a slight overestimate of the true rate. Data on births from 1996 through 2000 are from the Office of Vital Statistics, DPHHS, while female population data are from CEIC.

Timing of Prenatal Care: Measured by the births to women who began receiving prenatal care during the first trimester (the first three months) of pregnancy as a percent of all births. These data represent five-year averages (1996-2000) and were provided by the Office of Vital Statistics, DPHHS.

Adequacy of Prenatal Care (as measured by the Kotelchuck index): Based on birth certificate data (1996-2000) from the Office of Vital Statistics, DPHHS, this index attempts to characterize two dimensions of prenatal care.

1) Adequacy of initiation of prenatal care (i.e., the month care begins – assuming the earlier the care begins, the more adequate the prenatal care).
2) Adequacy of received services, once prenatal care has been initiated (a ratio of the actual number of visits to the expected number of visits per American College of Obstetricians and Gynecologists' prenatal care visitation standards for uncomplicated pregnancies).

These two dimensions are combined into a single "Adequacy of Prenatal Care Utilization Index. Readers unfamiliar with this index, its assumptions and limitations are referred to: Kotelchuck, M. 1994. Am. Journal of Public Health. Vol. 84: 1414-1420.

Percent Low Birthweight: Percent of births for which the weight of the newborn was less than 2,500 grams (5 lbs. 8 oz.). Data are from the Office of Vital Statistics, DPHHS, for the five-year period 1996-2000.

Infant Mortality: Rate of infant (from birth to 364 days old) deaths per 1,000 live births during the five-year period 1996-2000. Data are from the Office of Vital Statistics, DPHHS.

Cancer Incidence Rate: Number of new cancer cases diagnosed during 1996-2000 per 100,000 population. This incidence is ***age-adjusted*** to the U.S. 2000 standard-million population; previous editions have used the U.S. 1970 standard-million population. Therefore, *the cancer incidence rates in this edition cannot be compared to the rates in previous editions*. This change conforms to a new federal policy for reporting disease rates and it allows for the age-adjusted rate to better reflect the current age distribution and occurrence of cancer. Age-adjusted rates include all malignant cancers plus in-situ bladder cancers. County incidence rates may be based upon a small number of cases and unstable; the 95% confidence interval is indicated in parentheses. The Montana Central Tumor Registry, DPHHS, provided the cancer incidence rates (http://www.dphhs.state.mt.us/services/statistical_information/vital/statistical_tables.htm).

Leading Causes of Death: The three causes of death that occurred with greatest frequency from 1996 through 2000 (the first cause listed being the most frequent). Death rates (except heart disease – see heart disease definition) are not shown because they may be unreliable for many counties. Data are from the Office of Vital Statistics, DPHHS.
(CLRD = chronic lower respiratory diseases, an ICD-10 category which replaced the ICD-9 category chronic obstructive pulmonary diseases (COPD). The categories differ in that CLRD does not contain those causes of death in ICD-9 rubric 495, which include "extrinsic allergic alveolitis.")

Heart Disease Death Rate: The number of resident deaths in 1996-2000 from heart disease per 100,000 population. County level statistics may be unreliable due to small numbers and should be used cautiously. Heart disease includes: acute rheumatic fever; chronic rheumatic heart diseases; hypertensive diseases (except essential hypertension); hypertensive heart and renal disease; ischemic heart diseases; pulmonary heart disease and diseases of pulmonary circulation; and other forms of heart disease. Data are from the Office of Vital Statistics, DPHHS.

Cause-Specific Death Rates, provided for **Motor Vehicle Accidents**, **Suicide**, and **Traumatic Injury:** The number of resident deaths in 1996-2000 from the stated cause per 100,000 population. These rates are presented because Montana death rates are higher than national rates for these causes. County-level statistics may be unreliable and should be used cautiously. Deaths are tabulated by the deceased's county of residence and therefore do not indicate where the accident, suicide or injury occurred. Data are from the Office of Vital Statistics, DPHHS.

Percent of Motor Vehicle Crashes Involving Alcohol: The percent of all motor vehicle crashes that *occurred* in the county or state during 1996-2000, were reported to the Montana Highway Patrol, and involved the use of alcohol. When used as an indicator of the prevalence of drinking and driving among residents of the county/state, this measure may be limited by the inclusion of crashes involving non-residents, the exclusion of resident crashes that occurred in other counties/states, or by the absence of accidents that were not reported. Data are from the Montana Department of Transportation (http://www.mdt.state.mt.us/trafsafety/).

Percent of Medicaid Population Receiving Mental Health Services: The number of Medicaid eligible persons who received mental health services in state FY 2001 divided by the number of Medicaid eligible persons in the county/state in state fiscal year 2001. Mental health service data were provided by the Addictive and Mental Disorders Division, DPHHS; the Medicaid Services Bureau, DPHHS, provided the data on Medicaid eligibility.

Percent of 2-Year Olds Seen by a Health Care Provider Who are Fully Immunized: A sample proportion of children, from 24 through 35 months of age, who have a vaccination history on file with a vaccine provider indicating their immunization status as up to date. Up to date immunization status means: diphtheria, tetanus and pertussis - 4 doses; polio - 3 doses; H. influenzae type b (Hib) - 3 doses; measles, mumps and rubella -1 dose; hepatitis B – 3 doses. This statistic is an indicator of the vaccination status of children from 24 to 35 months of age **who are seen by a health care provider**. These data are from the Immunization Section of the Communicable Disease Control and Prevention Bureau, DPHHS, for the year 2001.

STD Incidence: Number of reportable new cases of sexually transmitted diseases (chlamydia, gonorrhea, syphilis) per 100,000 population during 1996-2000. Data are from the STD/HIV Section of the Communicable Disease Control and Prevention Bureau, DPHHS (http://www.dphhs.state.mt.us/services/statistical_information/statistical_information.htm).

Health Resource Assessment

Hospitals, Critical Access Hospitals (CAH), Health Clinics, Health Centers, Nursing Homes, Aging Services, and Home Care Services: Numbers of state licensed facilities are counts of licenses recorded as of February 2002 in the Licensure and Certification Bureau, Quality Assurance Division, DPHHS. The licensure list is continuously updated – the most current information available can be obtained by calling the Licensure and Certification Bureau at (406) 444-0596.

Numbers of CAH were obtained from the MHA: An Association of Montana Health Care Providers (formerly Montana Hospital Assoc.), were current as of August 2002, and include the Ft. Belknap IHS Hospital in Harlem.

When the number of beds is shown, it represents the total number of beds in all facilities of the stated type in the county/state.

Rural Health Clinics, Federally Qualified Health Centers, and Indian Health Service (IHS) and Tribal Health Facilities: The Office of Primary Care, DPHHS, maintains information on Rural Health Clinics and Federally Qualified Health Centers. The Federally Qualified Health Centers include five urban Indian clinics, one each located in Great Falls, Helena, Missoula, Butte, and Billings. The information was current as of July 2002.

IHS/Tribal Health Facility information was provided by the Billings Area IHS. IHS facilities include hospitals, health centers, and health stations. Tribal health facilities include health centers and health stations. Counts are combined into a single statistic, "IHS and Tribal Health Facilities."

Availability of 9-1-1 Service: Based on information from the Montana Department of Administration 911 Program, September 2002. A 9-1-1 call goes over dedicated phone lines to the 9-1-1-answering point closest to the caller, and trained personnel then send the emergency help needed. Enhanced 9-1-1 is a system which routes an emergency call to the 9-1-1

center closest to the caller AND automatically displays the caller's phone number and address. In most areas, information about phone number and location is not yet available for 9-1-1 calls made from a cellular/wireless phone.

Availability of Emergency Medical Services: The Emergency Medical Services and Injury Prevention Section of the Health Systems Bureau, DPHHS, provided information on the type, number, and location of emergency medical service providers in each county, current as of May 2002. "Basic life support service" means an emergency medical service capable of providing care at the EMT-Basic equivalent level (includes defibrillation). "Advanced life support service" means an emergency medical service that has the capacity to provide care at the EMT-Intermediate or EMT-Paramedic equivalent level (based on current licensed level). The summarized categories of service include transporting, air, and non-transporting services. Communities with non-transporting or air-only advanced services are noted.

Public Health Resources: Provided by the Office of Public Health System Improvement, Health Policy and Services Division, DPHHS. Based on a survey of county health departments, completed in July/August 2002, the number of full-time equivalent (FTE) public health nurses, registered sanitarians, registered dietitians, and health educators. One FTE equals forty (40) hours per week. FTE's for individual counties are displayed with up to three decimals places (whole FTE's show no decimals), while FTE's for Montana overall are rounded to one decimal place.

The Central Montana Health District provides environmental health services and public health nurse services to a six county region (Fergus, Golden Valley, Judith Basin, Musselshell, Petroleum, Wheatland); public health nurse services provided by the Central Montana Health District outside of Fergus County are limited.

Primary Care Provider Resources:
Licensed Medical Doctors (MDs) and Doctors of Osteopathic Medicine (DOs): The Board of Medical Examiners (Montana Department of Labor and Industry) maintains records of active, licensed MDs and DOs in Montana (current as of 7/1/2002). The Billings Area IHS office maintains a list of IHS physicians (current as of 7/16/2002). The count of primary care MDs and DOs includes those listed with one or more of the following practice areas: family practice, general practice, geriatric medicine, internal medicine, pediatrics, and obstetrics-gynecology. This count *includes* specialists who provide primary care services in conjunction with their specialty practice and, therefore, is *not* comparable to previous editions of the Montana County Health Profiles. This list was cross-referenced, as necessary, with the 2002 Montana Medical Association Directory of Montana Physicians to clarify practice area.

Nurse Practitioners and Nurse Midwives: The Board of Nursing (Montana Department of Labor and Industry) maintains records of active, licensed nurse practitioners and nurse midwives in Montana. These counts are from a licensure list obtained in July 2002.

Physician Assistant Certified (PA-C): The Board of Medical Examiners (Montana Department of Labor and Industry) maintains records of active, licensed PACs in Montana. The count of PACs is from a licensure list obtained in August 2002 with license expiration dates of 9/20/02 (4 licenses) and 10/31/02 (206 licenses).

Dental Health Resources: The count of active, licensed Montana dentists and dental hygienists. Information was obtained from the Board of Dentistry (Montana Department of Labor and Industry) in July 2002.

Health Care Provider Shortage Status: The Primary Care Office maintains information about designations of Health Professional Shortage Areas (HPSAs), Medically Underserved Areas (MUAs), and Medically Underserved Populations (MUPs). This information was updated May 2002. "None" means either there is not a shortage in this county or an application for HPSA status has not been submitted or approved.

HPSAs are designated by the federal government (Health Resources & Services Administration). The **basic** criterion for designation is: 3,500 or more people served by a single primary care physician. High need or risk indicators, i.e. high infant mortality rates, high percentage of poverty population, may drop the required ratio to 3000:1

HPSAs may be awarded based on the following specialties:
A. Primary Medical Care HPSA - Areas with shortages of primary care physicians (Family Practitioners, General Practitioners, Obstetricians/Gynecologists, Pediatricians, Internal Medicine).
B. Mental Health HPSA - Areas with shortages mental health professionals (Psychiatrists, clinical Psychologists, Psychiatric Nurses, Psychiatric Social Workers and Marriage and Family Therapists.
C. Dental HPSAs - Areas with shortages of dentists, dental hygienists, and dental auxiliaries.